

the edges separated near the drainage tube, in 33 they separated at full extent, and in 2 the scar was much extended.—*Vratch*, St. Petersburg, Nos. 16-27, 1887.

P. J. POPOFF (Brooklyn).

**IV. Sarcoma of the Bladder.** By F. A. SOUTHAM (London.) At the beginning of this paper, Mr. Southam, by quotations from Stein, Reginald Harrison and Thompson, shows the existence of a belief that sarcoma of the bladder is a very rare growth. In suggesting that the opinion is not well founded, he draws attention to the fact that out of eighteen cases of tumor of the bladder under the care of himself or his colleagues during the last two years, six, or one-third of the whole number, were sarcomata, a proportion that is exactly the same as that in a group of six cases recently described by Sir Henry Thompson.

Basing his observation on the six cases which came under his examination, Mr. Southam comes to the following conclusions :

*Etiology.*—On this point he has of course little definite to say. In most of the recorded cases the growth was primary, though in four cases the bladder was affected by extension from a neighboring organ, while in two interesting cases the bladder tumor was preceded by sarcoma in the cranium and eyeball. In a few cases the tumor was associated with passing gravel or small calculi, but that "the growth appears to have been directly due to local irritation," I think it would be difficult to prove. Stricture of the urethra, urethritis, enlarged prostate, etc., are mentioned as probable causes, and Mr. Southam supports this idea by citing the fact that the growth is much commoner in males than in females. But that long-continued local irritation gives rise to tumor-growths would, I think, be more readily admitted in the case of epithelioma than of sarcoma; while a consideration of the age of the patients would further induce one to discard such irritation as a cause. For in an interesting table Mr. Southam shows that out of thirty-four recorded cases, ten occurred in patients under ten years of age, a larger number than occurred in any other "decade," and an age which is necessarily freest from these causes of local irritation, ex-

cept, of course, calculus. He makes, however, the interesting suggestion that papillomata may after a time "take on sarcomatous action," and, indeed, mentions an important case under his care, in which, after he had removed a papillomata, a recurrence took place, part of the second growth being distinctly sarcomatous.

*Age and Sex.*—There are two periods at which the growth occurs much more frequently than at any other, viz.: under ten, and between fifty and seventy years of age; while it is apparently more than twice as frequent in males as in females.

*Origin, Situation, Structure.*—Primary sarcoma of the bladder originates in the connective tissue of the sub-mucous layer, and it seems to attack the base of the organ most commonly. In most cases the growth projects into the bladder in one or more distinct tumors, the majority being sessile, with a broad attachment. Though in that they differ from papillomata, they may resemble the latter in being distinctly villous on the surface. But Mr. Southam mentions the important fact that if these villi be examined, in addition to capillary vessels the stroma will be found to contain numerous cells either round or spindle-shaped, similar to those making up the bulk of the growth. The growth usually remains confined to the walls of the bladder, though it may invade neighboring organs.

*Condition of Bladder and Kidneys.*—Chronic cystitis is of course produced; in one case ulceration and perforation of the wall took place, while in another the bladder was ruptured in consequence of retention of urine. Dilatation of the pelvis and calyces of the kidneys, with absorption of the kidney structure, has been found; also suppurative pyelitis and nephritis.

*Symptoms.*—These closely resemble the symptoms of other tumors of the bladder. Hæmaturia is prominent. In most cases it precedes—sometimes by a period of years—painful and frequent micturition, as in cases of papilloma, though, on the other hand, it may be a later symptom and produce a resemblance to cancer, in which difficult micturition is the earlier symptom. The bleeding is often profuse, clots being passed, and it is increased by the introduction of instruments. Painful and frequent micturition, sudden

stoppings of the stream, retention and incontinence of urine are also mentioned as symptoms. It is very important to note that Mr. Southam states that only very exceptionally are distinct portions of growth met within the urine, and he indicates this as a point of difference from papilloma. In none of his six cases were particles of the tumor found in the urine. If the growth be firm and large, it may be discovered by rectal or vaginal, or bimanual examination, and if the sound be used, it will be felt as a soft, smooth fulness, without the irregular and hard sensation of a cancer. But all these methods are sometimes fruitless, in which case it is suggested to wash out the bladder with a stream of water in the hope of detaching some fragments for examination. In females the constant straining sometimes terminates the difficulty by presenting the growth at the orifice of the urethra.

*Diagnosis.*—From this it will be seen that the diagnosis of sarcoma from other tumors of the bladder is often impossible. To distinguish a soft tumor from papilloma and a hard one from cancer will often be very difficult. Mr. Southam suggests that the age of the patient may be of assistance, as sarcoma is common in young subjects, while papilloma and cancer are not. But this cannot be said to be of much avail, as he has himself pointed out that, though the largest proportion of cases of sarcoma occurs under ten years of age, the next highest number is found between the ages of fifty and sixty, and the next again between sixty and seventy.

*Treatment.*—Removal by forceps or sharp spoon is advised, if possible through a perineal opening in males, or the dilated urethra in females. "In all cases, however, \* \* \* more complete access will be obtained through a supra-pubic opening. In one instance the growth was removed by supra-pubic cystotomy, after exploring the bladder from the perineum, its diffuse nature rendering its extirpation by the latter route impracticable." The supra-pubic method should be at once adopted in all males, I think, unless the previous examination has very definitely proved the narrow attachment and easy accessibility of the tumor—conditions not easily ascertained by examination. In females I think it should be very seldom necessary. Mr. Southam advises operative interference in all cases as "life is undoubtedly pro-

longed, and symptoms are relieved by a removal of the tumor though this may not be complete." He mentions recurrence as taking place at three, six and nine months after operation, though he mentions one brilliant case in which "a very diffuse growth was removed" and yet "nearly a year has now elapsed, and the patient is still in the enjoyment of good health and free from any bladder symptoms."—*Medical Chronicle*, June-July, 1888.

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